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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,197	12/28/2001	Sanchaita Datta	3003.2.9A	7746

7590 12/23/2004  
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EXAMINER

NGUYEN, THU HA T

ART UNIT PAPER NUMBER

2155

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/034,197

Applicant(s)

Examiner

Thu Ha T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims **1-21** are presented for examination.

### **Response to Arguments**

2. In view of Applicants' arguments in the appeal brief filed on August 17, 2004, PROSECUTION IS HEREBY REOPENED. New grounds of rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

### **Claim Rejections - 35 USC § 103**

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kitai et al.**, (hereinafter Kitai) U.S. Patent No. **5,948,069**, in view of **Albright et al.** (hereinafter Albright) U.S. Patent No. **6,209,039**.

5. As to claim 1, **Kitai** teaches the invention as claimed, including a controller which controls access to multiple independent networks in a parallel network configuration, the controller comprising:

a site interface connecting the controller to a site (abstract, figures 3, 7, 15, 22, 24, elements 3005, 3006);

a packet path selector which selects between network interfaces according to a specified criterion (abstract, figures 3, 7, 15, col. 7, lines 44-55, col. 8, lines 14-25, col. 9, lines 22-33, col. 12, lines 66-col. 13, lines 3);

wherein the controller receives a packet through the site interface (abstract, figures 3, 7, 15, 22, col. 2 lines 48-col. 3 lines 42, col. 5 lines 29-57).

However, **Kitai** does not explicitly teach at least two private network interfaces, a packet path selector which selects between private network interfaces and sends the packet through the private network interface that was selected by the packet path selector. **Albright** teaches at least two private network interfaces (figure 3, elements 310, 314), a packet path selector (figure 3, processors 204, 306) a packet path selector which selects between private network interfaces (figure 3, interface 310, 314, col. 5, lines 65-col. 6, lines 21, lines 39-51 [processor selects links/frame relay interface between links/frame relay interfaces]) and sends the packet through the private network

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interface that was selected by the packet path selector (col. 5, lines 24-35, col. 6, lines 22-38, col. 7, lines 17-25). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai and Albright** to include a packet path selector which selects between private network interfaces and sends the packet through the private network interface that was selected by the packet path selector because it would provide an efficient communications system that the data can be dynamically monitored and routed among links/paths in order to reduce the congestion or failure within the networks (col. 2, lines 15-25).

6. As to claim 2, **Kitai** does not explicitly teach the invention as claimed; however, **Albright** teaches wherein the controller control access to multiple independent frame relay networks, and each of the at least two private network interfaces comprises a frame relay network interface (figure 3, col. 6, lines 65-col. 7, lines 3). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai and Albright** to have the private network interfaces comprises a frame relay network interface because it would provide an efficient communications system that the selection of frame relay network interfaces may vary and dynamically depending on traffic load, failure of links/paths and so on. The system will quickly establish/select another path/link to maintain the levels of service guarantee to subscribers.

7. As to claim 3, **Kitai** teaches the invention as claimed, wherein the packet path selector selects between network interfaces according to a load-balancing criterion, thereby promoting balanced loads on devices that carry packets after the packets leave the selected network interfaces (abstract, figures 9, 19, col. 8 lines 13-25, col. 14 lines 62-col. 15 lines 8, col. 20 lines 1-col. 21 lines 59). However, **Kitai** does not explicitly teach private network interfaces. **Albright** teaches private network interfaces (figure 3). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai** and **Albright** to include private network interfaces because it would provide an efficient communications system that the selection of private network interfaces may vary and dynamically depending on traffic load, failure of links/paths and so on. The system will quickly establish/select another path/link to maintain the levels of service guarantee to subscribers.

8. As to claim 8, **Kitai** teaches the invention as claimed, wherein the controller comprises at least three network interfaces, each of which is selectable by the packet path selector (abstract, figures 3, 7, 15, 22, col. 2 lines 48-col. 3 lines 42, col. 5 lines 29-57). **Kitai** does not explicitly teach frame relay network interfaces; however, **Albright** teaches frame relay network interfaces (col. 6, lines 64-col. 7, lines 3). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai** and **Albright** to include frame relay network interfaces because it would provide an efficient communications system that the selection of frame relay network interfaces may vary and dynamically depending on

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traffic load, failure of links/paths and so on. The system will quickly establish/select another path/link to maintain the levels of service guarantee to subscribers.

9. As to claim 9, **Kitai** teaches the invention as claimed, wherein the controller operates in a system providing at least one point-to-point connection (col. 10 lines 50-65. col. 16 lines 8-23, col. 17 lines 1-10).

10. As to claim 10, **Kitai** does not explicitly teach the invention as claimed; however, **Albright** teaches wherein the controller operates in a system providing connectivity over at least two frame relay networks from at least two carriers, each frame relay network operating on its own clock which is different from the clock of the other frame relay network (abstract, figures 2-3, 7, col. 10 lines 36-col. 11 lines 9, col. 13 lines 27-52). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai** and **Albright** to have at least two frame relay networks from at least two carriers, each frame relay network operating on its own clock which is different from the clock of the other frame relay network because it would have an efficient communications system that provides a number of point-to-point channels with different carriers and clocks through multiplexing network to improve network traffic and failure.

11. As to claim 11, **Kitai** does not explicitly teach the invention as claimed; however, **Albright** teaches wherein each private network interface is an indirect

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interface tailored to a particular type of frame relay network (figure 3, col. 7, lines 6-16).

It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai and Albright** to have the process of each private network interface is an indirect interface tailored to a particular type of frame relay network because it would have an efficient communication system to control and select the reliability and dynamically interface/paths among multiple interfaces/paths.

12. As to claim 12, **Kitai** does not explicitly teach the invention as claimed; however, **Albright** teaches wherein each private network interface is a direct interface comprising an Ethernet card (col. 13 lines 38-52). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai and Albright** to have each private network interface is a direct interface comprising an Ethernet card because it would have an efficient communications system that provide Ethernet card to improve private network security, traffic and failure.

### Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made



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to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 4, 13-16 and 18 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over **Kitai** U.S. Patent No. **5,948,069**, **Albright et al.** (hereinafter Albright) U.S. Patent No. 6,209,039, in view of **Pearce et al.**, (hereinafter Pearce) U.S Patent No. **5,910,951**.

15. As to claim 4, **Kitai** does not teach the invention as claimed; however, **Albright** teaches private network interfaces (figure 3, col. 6, lines 65-col. 7, lines 3). **Pearce** teaches wherein the packet path selector selects between network interfaces according to a reliability criterion thereby promoting use of devices that will still carry packets after the packets leave the selected network interfaces, when other devices that could have been selected are not functioning (abstract, col. 2 lines 51-col. 3 lines 12). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai**, **Albright** and **Pearce** to include private network interfaces and selector to select paths/interfaces according to a reliability criterion because it would have an efficient communication system to control and select the reliable, qualifiable network/interface/path among multiple networks/interfaces/paths.

16. As to claim 13, **Kitai** teaches the invention as claimed, including a method for combining connections for access to multiple parallel networks, the method comprising the steps of:

obtaining a controller, the controller comprising a site interface, and a packet path selector which selects between network interfaces according to a specified criterion (abstract, figures 3, 7, 15, 22, 24, col. 5 lines 29-63);

connecting the controller site interface to a site to receive packets from a computer at the site (abstract, figures 3, 7, 15, 22, col. 2 lines 48-col. 3 lines 42, col. 5 lines 29-57);

connecting a first network interface of the controller to a first network (abstract, figures 3, 7);

sending a packet to the site interface which then sends the packet through a network interface selected by the packet path selector (abstract, figures 3, 7, 15, 22, col. 2 lines 48-col. 3 lines 42, col. 5 lines 29-57).

However, **Kitai** does not explicitly teach at least two private network interfaces, a packet path selector which selects between private network interfaces, then sends the packet through a private network interface selected by the packet path selector and connecting a second private network interface of the controller to a second private network which is parallel to and independent of the first private network.

**Pearce** teaches connecting a second private network interface of the controller to a second private network which is parallel to and independent of the first private network (abstract, figures 1, 5, col. 1 lines 47-col. 2 lines 60).

**Albright** teaches at least two private network interfaces (figure 3, elements 310, 314), a packet path selector (figure 3, processors 204, 306), a packet path selector which selects between private network interfaces (figure 3, interface 310, 314, col. 5, lines 65-col. 6, lines 21, lines 39-51 [processor selects links/frame relay interface between links/frame relay interfaces]), then sends the packet through a private network interface selected by the packet path selector (col. 5, lines 24-35, col. 6, lines 22-38, col. 7, lines 17-25). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine features **Pearce and Albright** into **Kitai** because it would provide an efficient communications system that the data can be dynamically monitored and routed among links/paths in order to reduce the congestion or failure within the networks (col. 2, lines 15-25).

17. As to claim 14, **Kitai** does not explicitly teach the invention as claimed; however, **Albright** teaches wherein the private networks are frame relay networks (figure 3, col. 6, lines 65-col. 7, lines 3). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai and Albright** to have the private network interfaces comprises a frame relay network interface because it would provide an efficient communications system that the selection of frame relay network interfaces may vary and dynamically depending on traffic load, failure of links/paths and so on. The system will quickly establish/select another path/link to maintain the levels of service guarantee to subscribers.

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18. As to claim 15, **Kitai** teaches the invention as claimed, further comprising the step of specifying the criterion for use by the packet path selector, wherein the specified criterion is a load balancing criterion (abstract, figures 9, 19, col. 8 lines 13-25, col. 14 lines 62-col. 15 lines 8, col. 20 lines 1-col. 21 lines 59).

19. As to claim 16, **Kitai** does not explicitly teach the invention as claimed; however, **Pearce** teaches the step of specifying the criterion for use by the packet path selector, wherein the specified criterion is a reliability criterion (abstract, col. 2 lines 51-col. 3 lines 12). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai**, **Albright** and **Pearce** to include private network interfaces and selector to select paths/interfaces according to a reliability criterion because it would have an efficient communication system to control and select the reliable, qualifiable network/interface/path among multiple networks/interfaces/paths.

20. As to claim 18, **Kitai** does not explicitly teach the invention as claimed; however, **Albright** teaches wherein at least one of the steps connecting a private network interface of the controller connects the controller to a User-to-Network Interface in a router of a frame relay network (abstract, figure1). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai** and **Albright** to have a the controller connects the controller to a

User-to-Network Interface in a router of a frame relay network because it would improve private network security, traffic and failure.

21. Claim 5 is rejected under 35 U.S.C. § 103 (a) as being unpatentable over **Kitai, Albright**, in view of **Dutta et al.**, (hereinafter Dutta) U.S Patent No. **6,546,423**.

22. As to claim 5, **Kitai** does not explicitly teach the invention as claimed; however, **Albright** teaches private networks (figure 3, col. 6, lines 65-col. 7, lines 3). **Dutta** teaches wherein specifying the criterion for use by the packet path selector, wherein the specified criterion is a security criterion, thereby promoting use of multiple networks to carry different pieces of a given message so that unauthorized interception of packets on fewer than all of the networks used to carry the message will not provide the total content of the message (abstract, figures 1-2, col. 1 lines 29-64, col. 5 lines 31-54). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai, Albright and Dutta** to have private networks and the packet path selector selects between network interfaces according to a security criterion because it would improve the data transferring more secure and efficient between networks.

23. Claim 17 is rejected under 35 U.S.C. § 103 (a) as being unpatentable over **Kitai, Albright, Pearce**, in view of **Dutta et al.**, (hereinafter Dutta) U.S Patent No. **6,546,423**.

24. As to claim 17, **Kitai, Albright and Pearce** do not explicitly teach the invention as claimed; however, **Dutta** teaches the step of specifying the criterion for use by the packet path selector, wherein the specified criterion is a security criterion (abstract, figures 1-2, col. 1 lines 29-64, col. 5 lines 31-54). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai, Albright, Pearce and Dutta** to have the packet path selector selects between private network interfaces according to a security criterion because it would improve the data transferring more secure and efficient.

25. Claims 6-7 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over **Kitai**, and **Albright**, in view of **Goldszmidt et al.**, (hereinafter Goldszmidt) U.S Patent No. **6,195,680**.

26. As to claim 6, **Kitai** does not explicitly teach the invention as claimed; however, **Albright** teaches private networks (figure 3, col. 6, lines 65-col. 7, lines 3). **Goldszmidt** teaches wherein the controller sends packets out of sequence over the parallel networks (abstract, figures 3, 5, col. 14, lines 20-60). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai, Albright and Goldszmidt** to have the private networks and the controller sends packets out of sequence order because would have an efficient communication system to process, control and monitor the delivery of packet to control the traffic load.

27. As to claim 7, **Kitai** and **Albright** do not explicitly teach the invention as claimed; however, **Goldszmidt** teaches wherein the controller places an encrypted sequence number in at least some of the packets which are sent out of sequence (abstract, figure 7, col. 1 lines 45-col. 2 lines 18, col. 15 lines 14-43). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai** and **Goldszmidt** to have the controller places an encrypted sequence number in at least some of the packets which are sent out of sequence because would have an efficient communication system to encrypt packet to improve its tolerance to error, lost and secure.

28. Claim 19 is rejected under 35 U.S.C. § 103 (a) as being unpatentable over **Kitai**, and **Pearce** U.S. Patent No. **5,910,951**, in view of **Goldszmidt** U.S Patent No. **6,195,680**.

29. As to claim 19, **Kitai** teaches the invention as claimed, including a method for combining connections for access to multiple independent parallel networks, the method comprising the steps of:

sending a packet to a site interface of a controller, the controller comprising the site interface which receives packets, at least two network interfaces, and a packet path selector which selects between network interfaces according to a specified criterion; and specifying the criterion for use by the packet path selector, wherein the specified

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criterion is load balancing (abstract, figures 3, 7, 9, 15, 19, 22, 24, col. 2 lines 48-col. 3 lines 42, col. 5 lines 29-63, col. 8 lines 13-25, col. 14 lines 62-col. 15 lines 8, col. 20 lines 1-col. 21 lines 59).

However, **Kitai** does not explicitly teach wherein the specified criterion is one of: reliability criterion, a security criterion.

**Pearce** teaches the specified criterion is reliability criterion (abstract, col. 2 lines 51-col. 3 lines 12).

**Goldszmidt** teaches the specified criterion is a security criterion (abstract, figures 1-2, col. 1 lines 29-64, col. 5 lines 31-54). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai**, **Pearce** and **Goldszmidt** to specified criterion is one of reliability and security because it would have an efficient communication system to control, select and transfer data over the reliability, qualification and security network amongst multiple networks.

30. Claims 20-21 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over **Kitai**, **Pearce** and **Goldszmidt**, in view of **Albright et al.** (hereinafter **Albright**) U.S. Patent No. **6,209,039**.

31. As to claim 20, **Kitai** teaches the invention as claimed, wherein the step of sending a packet to the controller site interface is repeated as multiple packets are sent, and the controller sends different packets of a given message to different networks



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(abstract, col. 3 lines 6-42). **Kitai** does not explicitly teach frame relay networks.

However, **Albright** teaches frame relay networks (figure 3, col. 6, lines 65-col. 7, lines 3). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai and Albright** to include frame relay networks because it would provide an efficient communications system that the selection of frame relay network interfaces may vary and dynamically depending on traffic load, failure of links/paths and so on. The system will quickly establish/select another path/link to maintain the levels of service guarantee to subscribers

32. As to claim 21, **Kitai** does not explicitly teach the invention as claimed; however, **Albright** teaches frame relay networks (figure 3, col. 6, lines 65-col. 7, lines 3). **Pearce** teaches the step of sensing failure of one of the parallel networks and automatically sending traffic through at least one other parallel network (abstract, col. 2 lines 50-col. 3 lines 12, col. 5 lines 33-63). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Kitai, Pearce and Albright** to include frame relay networks and the step of sensing failure of one of the parallel networks and automatically sending traffic through at least one other parallel network because it would detect and improve network security, traffic and failure.

**Conclusion**

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

34. Hemmandy (USPN 6,633,569), Choudhury et al. (USPN 5,933,412), Mawhinney et al. (USPN 6,038,219), Shenoda et al. (USPN 6,389,130), Allain et al. (USPN 6,449,259), and Border et al. (USPPN 2002/0010792) are recited for disclosing various information related to the claimed invention. Applicants are requested to consider these prior art references when responding to this office action.

35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Ha Nguyen, whose telephone number is (571) 272-3989. The examiner can normally be reached Monday through Friday from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SPE Hosain T. Alam, can be reached at (571) 272-3978.

Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications.

Thu Ha Nguyen

December 8, 2004

  
**HOSAIN ALAM**  
SUPERVISORY PATENT EXAMINER